Xerox Docket No. D/A0086

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Christopher D. BLAIR et al.

Application No.: 09/584,373

Filed: May 31, 2000

For: ROLL HAVING GLASS COATING

Group Art Unit: 1775

Examiner: G. Blackwell-Rudasill

Docket No.: 105732

#14

REQUEST FOR RECONSIDERATION

Director of the U.S. Patent and Trademark Office
Washington, D.C. 20231

Sir:

In reply to the June 4, 2003 Office Action, reconsideration of the rejections is respectfully requested in light of the following remarks.

I. Formal Matters

Claims 1-44 are pending. Claims 1, 2, 5, 6, 10-15, 18, 19 and 23-26 are rejected. Claims 3, 4, 8, 9, 12, 16, 17, 21, 22 and 25 are objected to. Claims 27-41 and 44 are withdrawn from consideration. Applicants respectfully request rejoinder of the process claims upon determination of allowance of the article claims.

Applicants gratefully acknowledge that claims 3, 4, 8, 9, 12, 16, 17, 21, 22 and 25 contain allowable subject matter. However, Applicants decline to rewrite the allowable claims into independent form at this time, and instead respectfully assert that all apparatus claims are in condition for allowance.

II. The Claims Satisfy All Formal Requirements

The Office Action objects to claims 3, 4, 16 and 17 based on informalities. Applicants assert that the term "soda" is well known to define sodium compounds. These

compounds include, for example, Na_2O, as provided in the specification at page 10, line 8. Thus, "soda" is not an indefinite term to one of ordinary skill in the art. Withdrawal of the claim objection is respectfully requested.

III. Claims 1-44 Define Patentable Subject Matter

The Office Action rejects claims 1, 2, 5, 6, 10 and 11 under 35 U.S.C. §102(b) as being anticipated by United States Patent 5,327,747 to Nakashima. Applicants respectfully traverse the rejection.

Nakashima fails to teach or suggest a roll comprising a core and a coating of a glass material provided over the core, wherein the glass material can be electrically charged and discharged, as recited in claim 1.

Instead, Nakashima discloses a roll member with a glass layer for guiding an article. In particular, Nakashima teaches a roll member 10 having a cylindrical body 11 whose outer surface is blast treated and overlaid with an undercoat layer 21 to prevent oxidation. Nakashima further teaches a smooth glass layer 22 sprayed over the undercoat layer 21, and describes a process of blast-treating the body 11, applying the undercoat layer 21, preheating the body 11, spraying glass material, cooling the roll member 10 and grinding the roll surface. See col. 2, lines 6-23, col. 3, lines 7-11, 29-33, 51-57, col. 4, lines 42-46, 53-55 and Fig. 1 of Nasashima.

There is no teaching or suggestion in Nakashima of a glass material for the coating being electrically chargeable and dischargeable. Further, Nakashima provides no teaching or suggestion for an electrical resistivity value or range related to such properties. Thus, for at least the reasons outlined above, Nakashima does not teach or disclose all the features recited in claim 1. Accordingly, Nakashima fails to anticipate the subject matter of claims 1, 2, 5, 6, 10 and 11 under 35 U.S.C. §102(b). Therefore, Applicants respectfully request withdrawal of the rejection.

The Office Action further rejects claims 1, 10, 11, 13, 14, 23, 24, 26, 42 and 43 under 35 U.S.C. §102(e) over U.S. Patent 6,254,976 to Ono with U.S. Patent 4,057,666 to Drummond, Jr. (Drummond) used as an evidentiary reference. This rejection is respectfully traversed.

Ono does not teach or suggest a roll comprising a core and a coating of a glass material provided over the core, wherein the glass material can be electrically charged and discharged, as recited in claim 1.

Instead, Ono discloses a charging member 10, 17 having a porous aluminum film 2 on a support 1. In particular, Ono teaches a charging roll 10 or a charging blade 17 in contact with a drum-shaped photoreceptor 11. Ono further teaches that the charging member 10, 17 has an aluminum support on which a porous anodized aluminum film 2 is formed. The film 2 has a surface protective layer 3 and is filled with deposited metal 4. Attached to the walls of the pores of the film 2 are electrically conductive material 6 of oxyacid salt. The layer 3 contains fine particles 5 and an abrasive 7 dispersed within the layer 3. See col. 3, lines 39-62, col. 4, lines 3-9 and Figs. 1-4 of Ono.

In addition, Ono teaches controlling the thickness of the porous anodized aluminum film 2 and controlling the electrical resistivity of the charging member 10, 17 by the depositing metal 4 in the pore to a specific fraction of the pore depth. Ono also teaches the surface protective layer 3 as comprising an organic high molecular compound, such as resin, rubber, polystyrene, elastomer, copolymer or latex. Ono alternatively teaches the surface protective layer as composed of an inorganic high molecular compound in which electrically conductive particles are to be dispersed including glass and various metal oxides. See col. 5, lines 20-22, 29-35, 56-62, col. 6, lines 28-55 of Ono.

By teaching a support overlaid with a porous metal film having deposited metal for electrical conduction and superposed by a surface protective layer, Ono does not teach or

disclose all the features of claim 1. Accordingly, Ono fails to anticipate the subject matter of claims 1, 10, 11, 13, 14, 23, 24, 26, 42 and 43 under 35 U.S.C. §102(e). Therefore, Applicants respectfully request withdrawal of the rejection.

Further, Drummond fails to compensate for the deficiencies of Ono. Instead, Drummond discloses a magnetic brush cylinder 46 formed from a base material 80, such as plastic, glass, rubber, ceramic, or the like, impregnated with chip-like pieces 81 of a relatively hard material such as tungsten carbide, sand, glass, silicone carbide, non-ferrous metals, or the like. See col. 4, lines 48-53 and Fig. 5 of Drummond. Also, Drummond discloses that the base material 80 should be electrically conductive, or contain a conductive filler, or plated with a suitable metal such as stainless steel. See col. 5, lines 5-15 of Drummond.

The Office Action further rejects claims 7, 15 and 18-20 under 35 U.S.C. §103(a) over Ono in view of Nakashima. This rejection is respectfully traversed.

Nakashima does not compensate for the deficiencies of Ono outlined above for independent claims 1 and 14. Nor does Nakashima teach, disclose or suggest the additional features recited in claims 7, 15 and 18-20. Instead, Ono discloses a support 1 having a porous anodized aluminum film 2 containing deposited metal 4 and electrical conducting material 6, and overlaid by a surface protective layer 3 containing fine particles 5. See col. 3, lines 39-52 of Ono. Additionally, Nakashima teaches a smooth glass layer 22 over an undercoat layer 21 of a cylindrical body 11. Nakashima applies the glass layer 22 to provide high chemical durability, such as acid and alkali resistance. See col. 6, lines 3-11 of Nakashima. Thus, Nakashima provides no motivation for modifying or combining its teachings to provide for a glass coating that can be electrically charged and discharged.

Further, there is no motivation to combine features related to smooth glass surface of Nakashima with porous anodized film of Ono, nor has the Office Action established sufficient motivation or a *prima facie* case of obviousness. Even assuming that motivation to

combine the applied references is established, the combination fails to teach or suggest the claimed features recited in claims 7, 15 and 18-20.

Neither Ono nor Nakashima, either separately or in combination, teach, disclose or suggest all the features recited in claims 7, 15 and 18-20. Thus, the combination of Ono and Nakashima fails to render obvious the subject matter of these claims. Withdrawal of the rejection of these claims as unpatentable is respectfully requested.

IV. Conclusion

In view of the foregoing, Applicants submit that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-44 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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